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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/994,873 | 11/28/2001 | Gustaaf A.P. Stoop | P-9616 | 9794 |

27581 7590 02/02/2004

MEDTRONIC, INC.
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EXAMINER

MANUEL, GEORGE C

ART UNIT

PAPER NUMBER

3762

DATE MAILED: 02/02/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/994,873

Applicant(s)

STOOP ET AL.

Examiner

George Manuel

Art Unit

3762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-68 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5.6.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mower '688.

Mower teaches when a ventricular contraction is sensed in either ventricle, a timer is initiated. If within a time window, the contraction is sensed in the other ventricle, all pacing is inhibited because the natural contractions are deemed to be simultaneous, (see col. 6, lines 16-34). Therefore, one of ordinary skill in the art would have found it obvious to treat the sensed first electrode signal as an invalid sensed signal since a pacing pulse will not be emitted.

One of ordinary skill in the art would have found it obvious to reset an escape interval when the second electrode senses the electrical signal in the timing window because Mower teaches ventricular contractions which occur within 5-10 milliseconds of each other result in sufficient hemodynamic efficiency so that pacing is not required and the delay window may be set to this order of magnitude.

Regarding claims 7, 15, 25, 45, 52 and 55, the examiner is interpreting the "number" to comprise "1".

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Regarding claims 29 and 58, one of ordinary skill in the art would have found it obvious to implement control unit 20 with a microprocessor because microprocessors are well known in the art to incorporate the functions of flip-flops and counters.

Regarding claim 36, the examiner is interpreting a wavelet analysis to comprise the morphological analysis of a sensed natural cardiac contraction.

Regarding claim 57, it is inherent that the controller 20 converts the sensed analog heart signals to a digital signal because the digital circuitry disclosed in Fig. 2 necessitates a digital signal input.

Regarding claims 60-68, Mower teaches delivering a pace pulse if ventricular contractions are not sensed in both ventricles within a period of coincidence defined by the time delay. Therefore, one of ordinary skill in the art would have found it obvious to pace the right (left) ventricle after an electrical signal is sensed by the left (right) ventricular electrode.

Conclusion

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Brady '621 and Thompson et al '234 disclose related cardiac sensing structures.
3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Manuel whose telephone number is (703) 308-2118. The examiner can normally be reached on Mon.- Fri., 9:00-5:00.

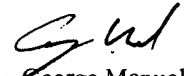
The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306 for regular communications and for After Final communications.

Serial Number: 09994873

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.



George Manuel
Primary Examiner
Art Unit: 3762
January 29, 2004